MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name CH174A

Use of the preparation Inkjet printing.

Version # 02

Revision date 03-17-2009

CAS # Mixture

Synonym(s) ColorSpan 0900700-111

Company identification

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomerinquiries@hp.com

Date prepared Mar 17, 2009

MSDS number 372522

2. Hazards Identification

Emergency overview Contact with skin and eyes may result in irritation.

Acute health effects

Skin contact Contact with skin may result in irritation. Avoid contact with the skin.

Eye contact Contact with eyes may result in irritation. Avoid contact with eyes.

Ingestion Acute ingestion may result in mild gastrointestinal distress. May be harmful if swallowed.

Potential health effects

Routes of exposure Potential routes of exposure to this product are skin and eye contact, ingestion, and inhalation.

3. Composition / Information on Ingredients

Component/substance	CAS number	% by weight
2-Pyrrolidone	616-45-5	<15
Glycerol Ethoxylate	31694-55-0	<5
1,2-Hexanediol	6920-22-5	<3
Diethanolamine	111-42-2	<2
Glycerol	56-81-5	<2
Isopropanol	67-63-0	<2
Dyes	Proprietary	1-5
Minor Ingredients		<1
Water	7732-18-5	Balance

4. First Aid Measures

First aid procedures

Eye contact In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops or persists.

Skin contact	In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Wash clothing separately before reuse.
Inhalation	In case of accident by inhalation: remove casualty to fresh air and keep at rest. If symptoms persist, get medical attention.
Ingestion	Rinse mouth out with water. Give several glasses of water. If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. If symptoms persist, get medical attention.

5. Fire Fighting Measures

Flash point and method	Not flammable
Hazardous combustion products	Decomposition of this product may yield oxides of sulfur and nitrogen.
Flammable properties	The product is not flammable.
Extinguishing media	
Suitable extinguishing media	Use any media suitable for the surrounding fires.
Unusual fire and explosion hazard	The product is not flammable.
Protection of firefighters	
Protective equipment and precautions for firefighters	Wear suitable protective equipment.

6. Accidental Release Measures

Personal precautions	Avoid contact with skin. Do not touch or walk through spilled material. Use personal protective equipment to minimize exposure to skin and eye.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Clean up in accordance with all applicable regulations. Clean-up methods - small spillage; Flush area with flooding quantities of water.

7. Handling and Storage

Handling	Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists of this product. Use personal protective equipment as required. Use only with adequate ventilation. When using, do not eat, drink or smoke.
Storage	Keep out of the reach of children. Keep tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Do not handle or store near an open flame, heat or other sources of ignition.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
Diethanolamine (111-42-2)	TWA	2 mg/m3	
Glycerol (56-81-5)	TWA	10 mg/m3	Mist.
Isopropanol (67-63-0)	STEL	400 ppm	
	TWA	200 ppm	

U.S. - OSHA

Components	Type	Value	Form
Diethanolamine (111-42-2)	TWA	3 ppm 15 mg/m3	
Glycerol (56-81-5)	PEL	15 mg/m3 5 mg/m3	Total dust. Respirable fraction.

Components	Type	Value	Form
	TWA	10 mg/m3 5 mg/m3	Total dust. Respirable fraction.
Isopropanol (67-63-0)	PEL	980 mg/m3 400 ppm	
	STEL	500 ppm 1225 mg/m3	
	TWA	400 ppm 980 mg/m3	

Personal protective equipment

Eye / face protection	Wear safety glasses; chemical goggles (if splashing is possible). Eye wash fountain and emergency showers are recommended.
Skin protection	Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.
Respiratory protection	Under normal conditions, respirator is not normally required. Provide adequate ventilation.
General hygeine considerations	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Launder contaminated clothing before reuse.

9. Physical & Chemical Properties

Color	Light Cyan
Odor	slight solvent
Odor threshold	Not available.
Physical state	Liquid.
Form	Aqueous solution.
pH	7 - 9
Melting point	< 32 °F (< 0 °C)
Freezing point	Not available.
Boiling point	212 °F (100 °C)
Flash point	Not flammable
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Relative density	1.04 g/cm³
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	161.2 g/L

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Avoid high temperatures.
Incompatible materials	Strong oxidizing agents.
Possibility of hazardous reactions	None known.

11. Toxicological Information

Sensitization

US ACGIH Threshold Limit Values: Skin designation

Diethanolamine (111-42-2)	Can be absorbed through the skin.

Carcinogenicity

IARC Monographs on Occupational Exposures to Chemical Agents: Evidence of carcinogenicity in humans

Diethanolamine (111-42-2)	Inadequate data.
Isopropanol (67-63-0)	Inadequate data.

US ACGIH Threshold Limit Values: A4 carcinogen

Isopropanol (67-63-0)	Group A4 Not classifiable as a human carcinogen.

Symptoms and target organs

Target Organs (NIOSH)

Diethanolamine (111-42-2)	Eyes
Diethanolamine (111-42-2)	Respiratory system
Diethanolamine (111-42-2)	Skin
Glycerol (56-81-5)	Eyes
Glycerol (56-81-5)	Kidneys
Glycerol (56-81-5)	Respiratory system
Glycerol (56-81-5)	Skin
Isopropanol (67-63-0)	Eyes
Isopropanol (67-63-0)	Respiratory system
Isopropanol (67-63-0)	Skin

12. Ecological Information

Ecotoxicity	Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Dispose of in compliance with federal, state, and local regulations. Do not allow this material to drain into sewers/water supplies.

14. Transport Information

IATA

Not regulated as dangerous goods.

General	Not a regulated article under United States DOT, IATA, ADR, IMDG, or RID.

15. Regulatory Information

US federal regulations	US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Diethanolamine (111-42-2)	1.0 %
Isopropanol (67-63-0)	1.0 %

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No

State regulations

US - New Jersey Community RTK (EHS Survey): Listed substance

Diethanolamine (111-42-2)	Substance no. 0686
Isopropanol (67-63-0)	Substance no. 1076

US - New Jersey Community RTK (EHS Survey): Reportable threshold

Diethanolamine (111-42-2)	500 LBS
Isopropanol (67-63-0)	500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-Pyrrolidone (616-45-5)	Listed.
Diethanolamine (111-42-2)	Listed.
Glycerol (56-81-5)	Listed.
Isopropanol (67-63-0)	Listed.

16. Other Information

HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 1 Flammability: 0 Instability: 0
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Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds
Manufacturer information	Hewlett-Packard 11311 K-Tel Drive Minnetonka, MN 55343 US Product Information 1-800-925-0563